awma Water Control Solutions

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NEWS

Photo courtesy of State Water Corporation

LAYFLAT SOLUTIONS

FROM DROUGHT TO FLOOD

"The Old Man Creek Project required the biggest, heavy duty LayFlat gates on the market. State Water was looking for superior engineering design, a high quality product to meet the stringent specification and reliable after service" said State Water Project Manager Mano Manorathan following the successful installation of AWMA's water control equipment.

Haslin Construction's $8 million project required three automated LayFlat (tilting) gates, four automated side winding gates, a bulkhead gate and series of stopboards with lifting frame and storage racks. State Water commented that "AWMA infrastructure will enhance the management of flow releases to meet specific environmental and downstream user needs at times and rates as prescribed".

The large LayFlat gate leaves are over 5m high x 3m wide, driven by hydraulic actuation. Engineering and quality scrutiny required unique features including 500mmOD cast stainless steel rope drums, 28mmOD stainless steel cables and a Rotork gear box capable of 90,000Nm of torque.

The gates are capable of providing drought relief supply to downstream landholders by means of a lowered sill. Alternatively they can also release bank full flows during targeted environmental watering or flooding.The Old Man Creek Project will raise the weir to control up to 20,000ML/day at Wagga which will result in water savings by reducing evaporation and evapotranspiration of flows along the creek as well as significant environmental and social benefits for overall improvement of the Riverine environment.

The gates on the weir and fishway will be automated via SCADA using the web based, award winning CARM system. For further information on the CARM project, please visit www.carmproject.com.au

GENERALLY SPEAKING

When do you need more than just a gate?

When your water control gate is supplied as a turn-key project incorporating control, monitoring and solar power - then it is a Water Control Solution.

AWMA have delivered hundreds of water control solutions for remote locations where solar power is utilised for the actuators to drive the gates.

From very small projects to some of the largest in the country with the right solution solar power is a very viable option, usually tens of thousands of dollars cheaper than bringing in mains power to a site. Solar powered sites are easily operated via local and/or remote management systems.

Solar power provides great redundancy for remote controlled sites - power outages during storm events are no longer an issue.

AWMA have developed unique DC powered actuator solutions for all gate types and sizes, designed for low power draw to suit solar applications.

Most remote solar sites are connected to SCADA systems for remote monitoring and control. AWMA can supply a full SCADA package or integrate into a clients existing network.

Next time you need a comprehensive solution for remote powered water control infrastructure you only need to make one call.

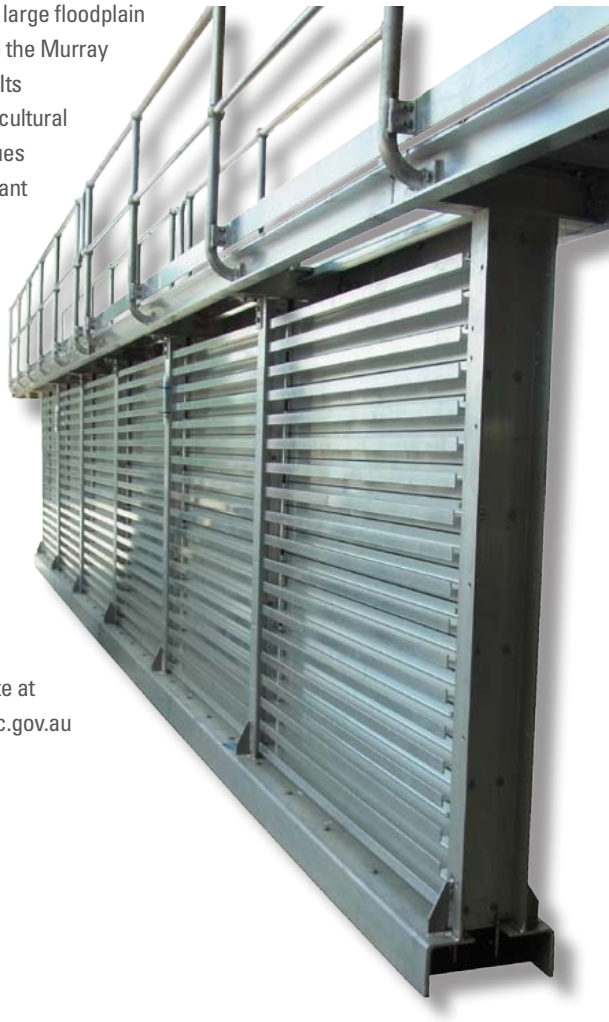
Brett Kelly
Managing Director

MALLEE FLOODPLAIN MANAGEMENT

AWMA were engaged by Vonmac to design, manufacture and supply a new regulator structure within Kings Billabong, Victoria. The segmented stopboards allow for the manual operation of modular segments to effectively manage flows. The infrastructure consists of six bays with 1900mm high segmented stopboards, inclusive of piers and an integral walkway. All items are fabricated from marine grade aluminium. The modular segments are manually inserted or removed, through customised walkway access, using the AWMA Lifting Ladder.

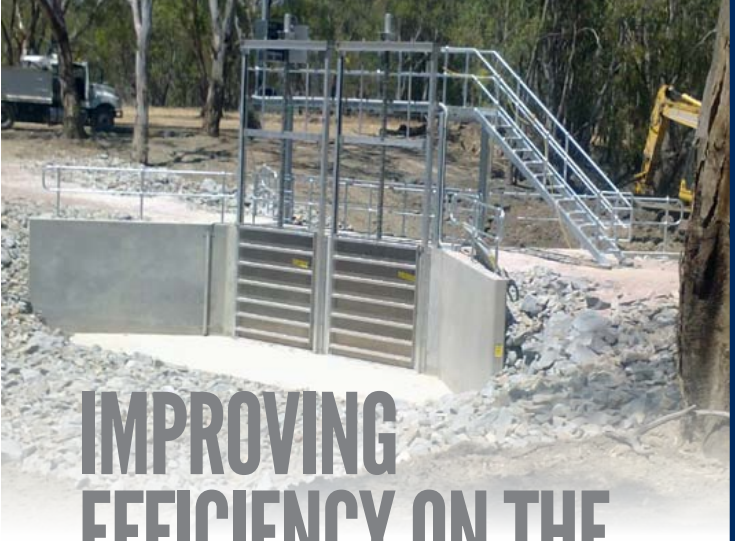
Kings Billabong is a large floodplain wetland adjacent to the Murray River near Mildura. Its impressive natural, cultural and community values mean it is an important local asset. The installation of the regulator will allow flows in the billabong to be managed in a balanced way for environmental, social and economic values.

For further information on this project refer to the Mallee CMA website at www.malleecma.vic.gov.au



UNIQUE 'AUTO-RELEASE'

The ACCIONA TRILITY JV is the delivery contractor for the Water Corporation's A$300M Mundaring Water Treatment Plant Project. AWMA were engaged to supply over 30 water control structures, including manual Segmented Stopboards, large modular Stoplogs, TLF topsealing penstocks and associated control equipment. Pictured, AWMA's unique self-engaging lifting frames secure large modular water control gates in place before unlocking for auto-release functionality. They are ideally used in confined space applications or where there may be increased OH&S risks associated with insertion and/or removal of equipment.



IMPROVING EFFICIENCY ON THE MURRUMBIDGEE

New water control structures have been completed at Oak Creek and Gras Innes as part of the $65 million Computer Aided River Management (CARM) Project. AWMA worked with contractor GJ&KL Douglass on this project which aims to bring water savings and improved service to water users along the Murrumbidgee River.

Two ULF undershot penstock gates were constructed from marine grade aluminium for the Oak Creek site. The gates were designed to withstand both on and off seating hydrostatic heads of 2.5m. Gate operation is via manual or automated control. Automatic operation will be based on inputs from upstream and downstream level sensors. SCADA access will be available via State Water's existing system with power available from solar panels installed adjacent to the site.

The Gras Innes site required a single ULF undershot penstock gate constructed from marine grade aluminium. The gate is manually operated and designed to withstand both on and off seating hydrostatic heads of 1.2m.

The Bundidgerry Creek is a tributary of the Murrumbidgee River, used as a conduit for delivery of irrigation water to the Murrumbidgee Irrigation Area. Oak Creek and Gras Innes are break outs from the Bundidgerry storage and are approximately 10 kilometres east of Narrandera, NSW.

CAN YOU RELY ON YOUR FLOOD CONTROL INFRASTRUCTURE?

Following continued adverse weather conditions AWMA are assisting many organisations to identify appropriate Flood Mitigation strategies.

AWMA have been involved in many urgent and staged projects in the past twelve months as a direct result of unexpected rainfall patterns.

Engaging AWMA in Early Contractor Involvement (ECI) provides a wider knowledge base for the development of potential solutions.

Don't be caught out, a large range of portable, temporary, semi-permanent and permanent flood control options are available with installation and training programs as required.

Please feel free to contact us at any stage of your project, complimentary site visits and consultation is available.

NEW AND IMPROVED

AWMA are continually looking for ways to improve our products and services.

Our research and development team have been analysing AWMA's purchasing, design, manufacturing and supply chain processes. As a result, AWMA are able to pass on to our clients significant savings to their capital investment without compromising on AWMA's proven product quality or performance. All AWMA products have been designed in accordance with the "Technical Specification for Fabricated Water Control Infrastructure".

Western Australia's Water Corporation is the latest company to benefit from innovative modifications to our standard TLF topsealing penstocks which are fully compliant with SPS 295 'Penstocks for Waterworks Purposes'.

AWMA specialise in developing unique water control equipment to suit client needs, site specifications, environmental conditions and operational requirements. Experience gained from one project adds value to others. AWMA have innovative solutions and design capabilities to meet the most challenging water management issues. If we can find ways to improve water savings, productivity and efficiencies, we make it a priority, for the sustainability of your company and ours.

PIPELINE ISOLATION

Fulton Hogan engaged AWMA to supply an isolating penstock for the pipeline inlet of Tasmanian Irrigation's Arthur Supply Project as part of the Midland Water Scheme.

The penstock shall be manufactured from marine grade aluminium and engineered to withstand approximately 7.5m of on seating head pressure. The penstock will be designed to allow operation via a handwheel or AWMA's Portable Actuator.

In addition to the penstock, AWMA will design and manufacture a set of segmented stoplogs to provide secondary isolation to the inlet chamber for facilitation of maintenance activities. Each stoplog segment is designed to be approximately 2.0m wide, 1.5m high and fabricated from marine grade aluminium. Insertion and removal shall be facilitated by AWMA's self-engaging stoplog lifting frame which has been designed to effectively eliminate the OH&S risks associated with such infrastructure.

The Midlands Water Scheme is a large irrigation project designed to support the expansion of agriculture in the Tasmanian midlands through the provision of high surety water. This project is due for completion in December 2013. For further information visit the Tasmanian Irrigation website.

CURRENT PROJECTS INCLUDE...

WASTEWATER DESALINATION FLOOD MITIGATION ENVIRONMENTAL IRRIGATION

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